CASE REPORT

Diastatic Rupture of Cecum Secondary to Carcinoma Stomach: A Case Report

Sasi Kumar K[1], Sajith P Sasi[2], G Balasubramanian[3], Nanda Kishore Maroju[4]
Senior Resident[1], Senior Resident[2], Assistant Professor[3], Associate Professor[4]
Department of Surgery Jawaharlal Institute of Post Graduate Medical Education and Research (JIPMER), Pondicherry
http://dx.doi.org/10.18049/jcmad/229a12

Abstract

Carcinoma stomach being one of the most common gastrointestinal malignancy usually presents with features like abdominal pain, vomiting, mass abdomen etc. but initial presentation as cecal perforation is a rare phenomenon. We report a rare case of carcinoma stomach presenting as cecal perforation.
Key words: *Carcinoma Stomach, Cecal perforation, Diastatic rupture.*

Address for correspondence: *Sasi Kumar K, Department of Surgery, JIPMER, D Nagar, Pondicherry, 605006 India. E-mail: sasikumark1983@gmail.com, Contact No. 00919489957045*

Case Report

37 year old male who is chronic alcoholic and smoker for more than 15 years presented with complaints of vomiting for one month and right lower abdominal pain for one day. Vomiting occurred immediately after food intake containing partially digested food particles. Pain developed sudden onset continuous pain which started in right lower abdomen and became diffuse. Patient also gave significant history of weight loss for one month. There was no hematemesis or melena or jaundice. On examination he was dehydrated with pulse rate 108/min and blood pressure of 110/70 mm of hg. There was no pallor or icterus. Abdominal examination revealed guarding and tenderness in right iliac, lumbar and hypochondriac regions.

Blood investigation revealed hemoglobin of 8.8gm/dl. His blood urea and serum creatinine was 67mg/dl and 2.1mg/dl respectively. Liver function test was within normal limits. Chest x-ray didn't reveal pneumoperitoneum. Ultrasound of abdomen showed evidence of antropyloric wall thickening extending for a length of 9.2cm with maximum thickness of 1.4cm. Minimal free fluid was present in right iliac fossa. In the view of peritoneal signs patient was posted for emergency laparotomy. Intraoperatively there was diffuse wall thickening of stomach infiltrating transverse colon and its mesentry causing obstruction at that level (figure1). Transverse, ascending colon and cecum was dilated but small bowel was of normal caliber. There were two gangrenous patches over the cecum one of them was perforated resulting in feculent contamination (figure2). There was multiple peritoneal and omental deposits. A limited ileocecal resection was done and both ends were brought out as stoma. Patient was started on oral feeds from postoperative day three. Esophagoduodenoscopy done postoperatively confirmed linitus plastic type of growth involving the entire stomach. Endoscopic biopsy from stomach and intraoperative omental biopsy specimens both revealed poorly differentiated adenocarcinoma of stomach. Since it was a metastatic disease patient was discharged with palliative medications for pain relief.

Discussion and Conclusion

Mechanical large bowel obstruction resulting in cecal perforation is a well known phenomenon though uncommon. [1] Such perforation had been denoted by the term diastatic rupture owing to the mechanism of injury. [1,6] This fact is well explained by Laplace law which is represented as T=PD (where T equals to wall tension, P equals to intrluminal pressure and D equals the diameter of the viscus). [2] Literature review showed various conditions like carcinoma of left colon, NSAID's induced colonic stricture,

Ogilvie's syndrome, pancreatic carcinoma etc as causes for such closed loop obstruction. [3,4,7] Xiuyan Yu and Junshu Zhang reported a case of carcinoma stomach presenting with large bowel obstruction as first case report in literature. [5] In our case there was obstruction of transverse colon secondary to infiltration from carcinoma stomach with diaststic perforation of cecum. On extensive search in literature no such case has been reported. Carcinoma stomach usually presents with pain abdomen, vomiting, mass abdomen etc. The exact percent of people with carcinoma stomach presenting with infiltration of transverse colon is not known[5].Lauren in 1965 classified two different histological types of gastric carcinoma, intestinal and diffuse. These two types not only differ by their histology but also with respect to their metastatic pattern with diffuse type showing extensive metastasis. Intestinal type usually metastasizes to liver while diffuse type spreads to peritoneum, ovaries, colon, lungs etc. In our case the histology of primary gastric cancer was of diffuse, poorly differentiated type of adenocarcinoma which supports the above evidence.

To conclude though carcinoma stomach can present with various clinical features in emergency it can also present with closed loop obstruction and cecal perforation. The treating surgeon during emergency laparotomy should be aware of such scenario and at the time of surgery cecum should be inspected for diastatic perforation.

Figure- 1: Carcinoma stomach diffusely infiltrating transverse colon & forming mass

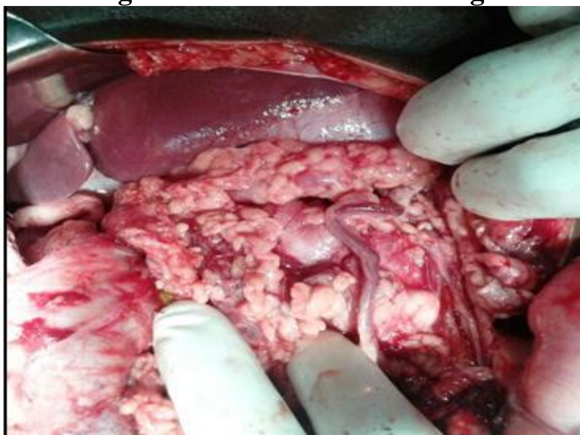
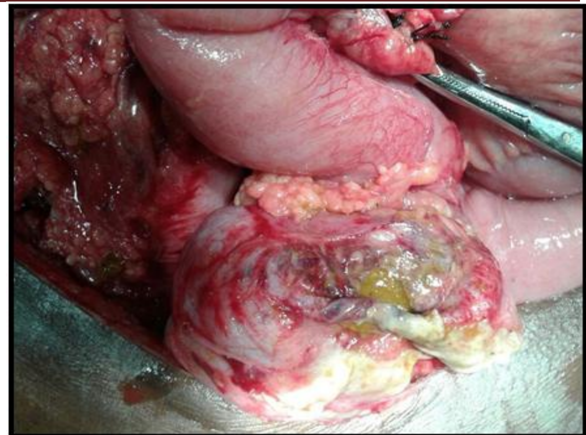


Figure- 2: Cecal gangrene with perforation



Source(s) of support: *Nil*
Conflict of Interest: *None declared*

References

1. Suleiman Jastaniah. Malignant Colonic Stricture with Cecal Perforation: A Case Report and A Review of Literature. Bahrain Med Bull 2001;23(2):93-94.
2. Novy, Rogers, Kirkpatrick. Diastatic Rupture of the Cecum in Obstructing Carcinoma of the Left Colon . AJR Am J Roentgenol 1975;123: 281-286. [PubMed]
3. Aloysius, Kaye, Lobo. Non-steroidal anti-inflammatory drug (NSAID)-induced colonic strictures and perforation: A case report. Dig Liver Dis. 2006;38:276–278. [PubMed]
4. Kristine DS, Sarah C and Frederick DC. LaPlace's law revisited: Cecal perforation as an unusual presentation of pancreatic carcinoma. World J Surg Oncol 2007;5:14. [PubMed]
5. Xiuyan YU, Junshu Z. Gastric Cancer with Large Bowel Obstruction as the First Presentation:A Case Report. Oncol Lett Nov 2013; 6(5):1377–1379. [PubMed]
6. Giuseppe Runza etal. Stercorary aseptic peritonitis due to diastatic caecal perforation: computed tomography findings. Acta Biomed 2006;77:106-108. [PubMed]
7. BC Das, IM Khan, Q Alam, A Rahman. Carcinoma Transverse Colon with Caecal Perforation Mimicking Appendicular Lump. Pulse 2009;3(1).